

CQSIM -Manual

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1. Setting up the Simulator

- `svn co http://bluesky.cs.iit.edu/svn/Cqsim/Cqsim`

After run this command, you will get the whole project in the folder Cqsim on your current working directory.

2. The Command Line Keys

ID	Name1	Name2	Type	Default	Comment
1	-j	--job	string	None	job trace file name
2	-n	--node	string	None	node structure file name
3	-J	--job_save	string	[job trace name]	formatted job trace data file name
4	-N	--node_save	string	[job trace name]+"_node"	formatted node structure data file name
5	-f	--frac	float	1	job density adjust
6	-s	--start	float	0	first job start virtual time
7	-S	--start_date	date	None	first job start date
8	-r	--anchor	int	0	first job position in job trace
9	-R	--read	int	-1	number of jobs read from the job trace
10	-p	--pre	string	"CQSIM_"	previous file name
11	-o	--output	string	[job trace name]	simulate result file name
12		--debug	string	"debug_"+[job trace name]	debug file name
13		--ext_fmt_j	string	".csv"	formatted job data extension type
14		--ext_fmt_n	string	".csv"	formatted job data extension type
15		--ext_fmt_j_c	string	".con"	temp job trace config extension type
16		--ext_fmt_n_c	string	".con"	temp job trace config extension type
17		--path_in	string	"InputFiles/"	input file path
18		--path_out	string	"Reults/"	output result file path
19		--path_tmp	string	"Temp/"	temp result file path
20		--path_debug	string	"Debug/"	debug file path
21		--ext_jr	string	".rst"	job result log extension type
22		--ext_si	string	".ult"	system information log extension type
23		--ext_ai	string	".adp"	adapt information log extension type
24		--ext_d	string	".log"	debug log extension type
25	-v	--debug_lvl	int	4	debug mode
26	-a	--alg	list	None	basic algorithm list
27	-A	--sign	list	None	sign of the basic algorithm element
28	-b	--backfill	int	0	backfill mode
29	-B	--bf_para	list	None	backfill parameter list

30	-w	--win	int-	0	window mode
31	-W	--win_para	list	None	window parameter list
32	-l	--ad_bf	int	0	backfill adapt mode
33	-L	--ad_bf_para	list	None	backfill adapt parameter list
34	-d	--ad_win	int	0	window adapt mode
35	-D	--ad_win_para	list	None	window adapt parameter list
36	-g	--ad_alg	int	0	algorithm adapt mode
37	-G	--ad_alg_para	list	None	algorithm adapt parameter list
38	-c	--config_n	string	"config_n.set"	config file - file name and path
39	-C	--config_sys	string	"config_sys.set"	system config file
40	-m	--monitor	int	None	monitor interval time
41	-M	--mon_para	list	None	monitor parameter list
42	-u	--uti	list	None	average utilization interval list
43	-e	--ver	string	"ORG"	version name

- For the parameters which are marked as “list” in Type, you can use the key multiple times to form a list.
e.g. if you write the command as -a w -a + -a 2, the simulator will get the list [‘w’, ‘+’, ‘2’]

3. The Configuration Files

- System Information Configuration file**
 - Contains all the parameters except those file name
 - Default Path: Cqsim/src/Config/config_sys.set
 - Pass in the simulator thought 39th parameter.
- Name Configuration file**
 - Contains all the file name parameters
 - Default Path: Cqsim/src/Config/config_n.set
 - Pass in the simulator thought 38th parameter.
- Backfill Adapt Configuration File**
 - Contains Backfill Adapt Parameters
 - Default Path: Cqsim/src/Config/ad_bf_para.set
 - Pass in the simulator thought 33th parameter.
- Start Window Adapt Configuration File**
 - Contains Start Window Adapt Parameters
 - Default Path: Cqsim/src/Config/ad_win_para.set
 - Pass in the simulator thought 35th parameter.
- Basic Algorithm Adapt Configuration File**
 - Contains Basic Algorithm Adapt Parameters
 - Default Path: Cqsim/src/Config/ad_alg_para.set

- Pass in the simulator thought 37th parameter.

4. Starting the Simulator

You can run the simulator with the default setting by the following command:

```
cd Cqsim/src/cqsim.py
```

5. Output Files

- **Debug file**
 - Contains debug information
 - Default Path: Cqsim/data/Debug/[file name].log
- **Job Result file**
 - Contains simulating result
 - Default Path: Cqsim/data/Results/[file name].rst
- **System Information file**
 - Contains running time system information
 - Default Path: Cqsim/data/Results/[file name].uti
- **Adapt Information file**
 - Contains adapt information
 - Default Path: Cqsim/ data/Results/[file name].adp